

The contribution of the Russian botanist Turczaninov to Australian plant taxonomy

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Abstract

The Russian botanist Turczaninov was an experienced herbarium researcher before he commenced work on Australian taxa. From 1847 to 1863 he described 43 genera and approximately 400 species of Australian plants, mostly from the collections of James Drummond. These taxa were published in 15 papers, most of them in *Bull. Soc. Imp. Naturalistes Moscou*. The problems of determination of publication dates of these papers is discussed and a list of the holotype specimens housed in the Turczaninov collection of the Herbarium of the Kholodny Institute, Kiev (KW) is presented.

Nicolai Stepanovitch Turtchaninov (1796–1864), usually referred to as Turczaninov, made a substantial contribution to Australian plant taxonomy by naming 43 genera and approximately 400 species of Australian flora. A keen and gifted self-trained botanist, he amassed a large herbarium of plants from many parts of the world. His government administrative and botanical career began in St Petersburg (Leningrad) and he spent most of his life in Siberia. He never left the USSR except for extensive journeys from Siberia into the Mongolian region collecting plant specimens which he added to his herbarium or used for exchange. Through exchange and purchase he acquired his large herbarium, including some Swan River Colony collections of James Drummond and John Gilbert as well as other Australian specimens. When Turczaninov retired he devoted much of his time to preparing and publishing descriptions of new species, many of them of plants of Australian origin.

Russian taxonomic research

The Botanical Garden in St Petersburg was, during the nineteenth century, one of the leading botanical research institutes in the world. The Czar, Peter the Great (Peter the 1st), who reigned from 1682–1725, was a great patron of natural history and founded a botanic garden in Moscow in 1706 and St Petersburg in 1714 (Stapf 1913). Peter the Great initiated a long period of Siberian exploration which was supported by later Czars and Empreses of Russia.

Under Czar Alexander Ist, who ruled from 1801–1825, there was further activity in botanical science. The gardens near Moscow were destroyed by the French invasion of Napoleon in 1812 and the Czar gave his patronage to the garden in St Petersburg. Botanical exploration continued and the taxonomic activities of Fischer and Meyer established St Petersburg as an important world centre of botanical field work and taxonomic research (Bongard 1835).

F. E. L. Fischer (1782–1854) founded the Société Impériale des Naturalistes de Moscou in 1805. The

bulletin of the Society, *Bull. Soc. Imp. Naturalistes Moscou*, began in 1829 (Prokhorov 1973–83, 3: 310, 17: 173). Later, as a Director of the Botanic Garden in St Petersburg, Fischer, usually known as Fischer von Waldheim, was to become a subscriber of James Drummond specimens and act as an intermediary in the exchange of plant specimens between Hooker at Kew and Turczaninov. Fischer also purchased a set of Preiss collections of W.A. plants (Fischer 1848).

Russian plant science in St Petersburg was dominated by botanists of Germanic origin until the 1850s and it was probably difficult for a native Russian like Turczaninov to practise plant taxonomy. Plant specimens from all over the world were gathered in the St Petersburg herbarium; many of these were from Australia. Familiar generic names such as *Laxmannia*, *Regelia* and *Siegesbeckia* were published there to commemorate Prussian or German botanists.

Nicolai Stepanovitch Turczaninov

Turczaninov was born in 1796 in Nikitovka, in the south of European Russia near the Ukrainian city of Kharkov. In 1810 he attended high school and later, the University in Kharkov. He apparently developed an early love for botany and was an avid collector of plants. In 1814 he graduated from Kharkov (Prokhorov 1973–83, 26: 448) and went to St Petersburg to join the Russian civil service. He became a controller in the Ministry of Finance but kept his interest in botany, publishing a list of plants of the St Petersburg area in 1825. This must have established his botanical credentials with the notable botanists of the time.

In 1828 Turczaninov accepted an administrative post at Irkutsk in Siberia. Here he had ample opportunity to travel widely in the Lake Baikal area where he collected many specimens, sending some to St Petersburg and starting his own herbarium for private use as well as some to use for exchange at a later date. In 1830 Turczaninov was given the title of Fellow of the Imperial Botanic Garden St Petersburg as the 'travelling

scientist' responsible for the vast Siberian region between the 'Altai mountains and the eastern ocean' (Pacific). This gave him official approval to mix his botanical activities with his administrative ones, enabling him to collect specimens over a wide area.

From 1830 Turezhaninov developed a collaboration with A. P. de Candolle. Correspondence preserved in Geneva, shows that de Candolle and Turezhaninov exchanged many botanical specimens (Bernardi 1967). Thus the private herbarium in Irkutsk began to grow and include material from southern Asia and an area of special interest to Turezhaninov, South America. In recognition of the botanical endeavours of Turezhaninov, de Candolle named a new genus of Compositae *Turezhaninovia* (Candolle 1836). Most western botanists submerge this with the genus *Aster*. However it is still recognized as a genus by modern Soviet taxonomists who, compared with western European botanists, have a narrower generic concept.

In 1831, 1832 and 1834 Turezhaninov published papers in *Bull. Soc. Imp. Naturalistes Moscou* on the botany of Siberia and Mongolia. In 1837 he was transferred westwards to the Siberian post of Krasnoarsk as President of the Board of Provincial Governors; later he became Governor of the surrounding region. He may have returned to Moscow in Nov. 1837 for a short period (Turezhaninov 1837).

In Krasnoarsk, Turezhaninov started to publish *Flora Baikalsi-Dahurica* in separate parts from 1842–1857 in *Bull. Soc. Imp. Naturalistes Moscou*. Later the entire work was published in 2 volumes (Stalfau and Cowan 1986). This Flora was an enormous contribution to east Asian botany and it established Turezhaninov as an experienced researcher before he started to study and describe Australian plant taxa.

At 49 years of age, in 1845, after 17 years in Siberia, Turezhaninov retired and moved his substantial herbarium to Taganrog on the sea of Azov near the Black Sea (Shipchinski 1953). Taganrog had assumed importance as a port for foreign trade in the 1780s (Prokhorov 1973–83, 7: 33, 25: 317); it was probably the port of entry of many herbarium specimens en route to Moscow and handled shipping to and from South America. In Taganrog, Turezhaninov fell from a herbarium ladder and fractured his leg. He became a cripple dependent on crutches and, unable to fulfil his desire to travel and collect in South America, he devoted himself to herbarium studies. By this time his herbarium included the 3rd collection of James Drummond which had been sent from the Swan River Colony in August 1844 (Erickson 1969) and Turezhaninov was able to prepare his first paper describing many new Australian taxa.

In 1857, in recognition of his contribution to Russian botany, Turezhaninov was awarded the prestigious Demidov prize of The Academy of Sciences of St. Petersburg (Prokhorov 1973–83, 26: 448).

Turezhaninov's herbarium

In 1847 Turezhaninov moved to Kharkov, accepting an offer to work in the university herbarium with his colleague Professor V. M. Czerniev. Turezhaninov's extensive herbarium, which by then included many Drummond collections of Swan River plants, was also moved from Taganrog to Kharkov. It included signif-

icant numbers of South American and Indian plants as well as specimens from Mexico, the Caribbean, Africa and south-eastern and eastern Asia (Jain 1969).

The private herbarium continued to grow through exchange and purchase of advertised herbaria. For example, in 1852, while in Kharkov, Turezhaninov acquired Schultes's herbarium from Munich for 3,000 Roubles (Renard in *Bull. Soc. Imp. Naturalistes Moscou* 26: 549). In 1859 he purchased a collection from Robert Brown (Renard in *Bull. Soc. Imp. Naturalistes Moscou* 32: 73) and he exchanged much material with Hooker, Bentham and others, including Steetz (Short and Sinkora 1988). His herbarium contained approximately 52,000 sheets when he transferred it to the Kharkov University in 1859 (Shipchinski 1953).

The Turezhaninov herbarium was appropriated by the invading Germans in the Second World War. The whole collection was to be transported from Kharkov to Berlin but the consignment was stalled in Posen, Poland and later returned to the Ukraine. In 1946 the non-Siberian portion went to the Herbarium of the Kholodny Institute in Kiev (Van Steenis 1950). The Turezhaninov herbarium now remaining in Kharkov contains only some of Turezhaninov's Siberian specimens. The Turezhaninov type specimens were selected from his herbarium, mounted, numbered 1–1059, and housed separately in the Kiev Herbarium (Myakushko *et al.* 1979).

A list of the holotype specimens of Australian origin, their place of publication and collector, with the collectors number where known, is presented in Table I. Sometimes specimens additional to those listed in the protologues published by Turezhaninov are included. Original spellings, including orthographic errors, have been retained in this list.

The Turezhaninov type collection of Australian plants in Kiev in June 1985, consisted of 355 species mounted and in the type collection and eight species in mounted, unsorted supplementary material. During my studies I located a number of Turezhaninov Australian types in the general herbarium. These were extracted and incorporated in the numbered collection and have been included in Table I. Approximately 40 type specimens of Australian taxa were not located because of insufficient time. It is likely that all could be found in the general collection. The type specimens of S. Stscheglew (Stschegl.), a student colleague of Turezhaninov at Kharkov who published a number of Australian and New Zealand species in 'Descriptio Epaeridearum Novarum', *Bull. Soc. Imp. Naturalistes Moscou* 32, 1: 3–23, were located in the general herbarium and are now in a separate type collection.

A list of the Australian plant genera described by Turezhaninov is given in Table II. This table lists the genera alphabetically, cites the reference for the original description, and gives the date of publication.

Dates of publication

In the period 1848–1855, described as the 'age of Terror of censorship' (Prokhorov 1973–83, 28: 35–6), all printed matter in Russia was required to be submitted to a board of censors for approval. This was usually done at the printers' proof stage. After printing, publications had to be approved for distribution.

Table I
Turezaninov type collections of Australian species in Kiev (KW)

Specimen number	Species ¹	Year & place of publication ²		Collector & collection no. ³
2	<i>Clematis gilbertiana</i>	1854	A 27(2): 273	Gilb. 62
11	<i>Hemistemma revolutum</i>	1849	A 22(2): 4	J.Dr. 3: 1
12	<i>Pleurandra erassifolia</i>	1849	A 22(2): 5	J.Dr. -: 120
13	<i>P. juniperina</i>	1849	A 22(2): 6	J.Dr. 3: 2
14	<i>P. mueronata</i>	1852	A 25(2): 139	J.Dr. 5: 290
15	<i>P. triandra</i>	1854	A 27(2): 280	Gunn s.n.
16	<i>P. verrucosa</i>	1852	A 25(2): 139	J.Dr. 5: 289
17	<i>Candollea helianthemoides</i>	1849	A 22(2): 8	J.Dr. 4: 118
18	<i>C. kochioides</i>	1849	A 22(2): 7	Gilb. 73
19	<i>C. teretifolia</i>	1849	A 22(2): 6	J.Dr. 4: 124
20	<i>C. tridentata</i>	1852	A 25(2): 140	J.Dr. 5: 288
21	<i>Hibbertia braeteosa</i>	1852	A 25(2): 140	J.Dr. 5: 287
23	<i>Oehrolasia drummondii</i>	1849	A 22(2): 3	J.Dr. -: 119
		1863	A 36(2): 549	
39	<i>Arabis cardamines</i>	1854	A 27(2): 292	J.Dr. 5: 285
43	<i>Cardamine paucijuga</i>	1854	A 27(2): 295	J.Dr. -: 131
47	<i>Meniocus australasicus</i>	1854	A 27(2): 297	J.Dr. -: 127
100	<i>Ionidium multiflorum</i>	1854	A 27(2): 340	J.Dr. 5: 72
111	<i>Drosera dichrosepala</i>	1854	A 27(2): 343	J.Dr. 5: 284
112	<i>D. filipes</i>	1854	A 27(2): 344	J.Dr. 5: 280
114	<i>D. platypoda</i>	1854	A 27(2): 343	J.Dr. 5: 281 = 231
123	<i>Contesperma pauciflorum</i>	1854	A 27(2): 352	Gilb. 86
124	<i>C. selaginoides</i>	1854	A 27(2): 352	J.Dr. -: 215
125	<i>C. spathulata</i>	1854	A 27(2): 352	Gilb. 88
				J.Dr. 5: 238
144	<i>Sollya parviflora</i>	1854	A 27(2): 361	J.Dr. 4: 99
				J.Dr. 5: 238
145	<i>Xerosollya gilbertii</i>	1854	A 27(2): 362	Gilb. 43
146	<i>Pronaya lanceolata</i>	1854	A 27(2): 364	Gilb. 66
147	<i>P. latifolia</i>	1854	A 27(2): 363	J.Dr. 5: 240
148	<i>P. mulleriana</i>	1863	A 36(1): 561	Blandowsky 58
149	<i>P. pedunculata</i>	1863	A 36(1): 560	J.Dr. s.n., 1839
150	<i>P. sericea</i>	1857	A 27(2): 363	J.Dr. 4: 97
151	<i>Cheiranthra filifolia</i>	1854	A 27(2): 364	J.Dr. 4: 94
152	<i>Marianthus purpureus</i>	1854	A 27(2): 364	J.Dr. 4: 96
156	<i>Frankenia bracteata</i>	1854	A 27(2): 368	J.Dr. -: 136
157	<i>F. glomerata</i>	1854	A 27(2): 368	J.Dr. 5: 79
158	<i>F. parvula</i>	1854	A 27(2): 368	J.Dr. 5: 81
159	<i>F. punctata</i>	1854	A 27(2): 367	J.Dr. -: 137
183	<i>Hibiscus drummondii</i>	1858	A 31(1): 192	J.Dr. 5: 90
184	<i>H. geraniifolius</i>	1858	A 31(1): 195	J.Dr. 4: 104
214	<i>Rulingia althaeifolia</i>	1852	A 25(2): 151	J.Dr. 5: 268
215	<i>R. cuneata</i>	1852	A 25(2): 151	J.Dr. 5: 271
216	<i>R. hexamera</i>	1852	A 25(2): 151	J.Dr. 5: 273
217	<i>R. nana</i>	1852	A 25(2): 150	J.Dr. 5: 270
218	<i>R. pauciflora</i>	1863	A 36(1): 570	J.Dr. 7: 99
219	<i>R. pulchella</i>	1846	A 22(2): 10	J.Dr. -: 111
				J.Dr. 7: 97
	= <i>Commersonia pulchella</i>	1846	A 19(2): 502	J.Dr. -: 111
220	<i>R. rotundifolia</i>	1852	A 25(2): 152	J.Dr. 5: 272
229	<i>Achilleopsis densiflora</i>	1849	A 22(1): 10	J.Dr. -: 100
230	<i>Thomasia brachystachys</i>	1852	A 25(2): 143	J.Dr. 5: 262
231	<i>T. gilbertiana</i>	1849	A 22(2): 10	Gilb. 82
232	<i>T. involucreata</i>	1852	A 25(2): 143	J.Dr. 5: 255
233	<i>T. rhyncocarpa</i>	1852	A 25(2): 142	J.Dr. 5: 261
234	<i>T. rugosa</i>	1846	A 19(2): 501	J.Dr. -: 105
235	<i>T. sarotes</i>	1852	A 25(2): 145	J.Dr. 5: 256
236	<i>Ditomostrophe angustifolia</i>	1846	A 19(2): 499	J.Dr. -: 102
237	<i>Thomasia triloba</i>	1846	A 19(2): 500	J.Dr. -: 106
238	<i>Lasiopetalum acutiflorum</i>	1852	A 25(2): 145	J.Dr. 5: 254
239	<i>L. capitellatum</i>	1852	A 25(2): 148	J.Dr. 5: 263
240	<i>L. stelligerum</i>	1852	A 25(2): 147	J.Dr. 5: 257
241	<i>L. quinquenervium</i>	1852	A 25(2): 146	J.Dr. 5: 260
242	<i>Asterochiton pygmaeus</i>	1852	A 25(2): 138	J.Dr. 5: 258
243	<i>Corethrostylis mierophylla</i>	1852	A 25(2): 148	J.Dr. -: 259
				Gilb. 83
244	<i>Sarotes latifolia</i>	1852	A 25(2): 150	J.Dr. 5: 265
245	<i>S. rosmarinifolia</i>	1852	A 25(2): 149	J.Dr. 5: 266
246	<i>Actinostigma lanceolatum</i>	1859	A 32(1): 259	Brogden s.n.
386	<i>Dodonea inaequifolia</i>	1858	A 31(1): 408	J.Dr. 4: 258
387	<i>D. larreoides</i>	1858	A 31(1): 408	J.Dr. 3: 213
388	<i>D. ptarmicaefolia</i>	1852	A 25(2): 155	J.Dr. 5: 248
416	<i>Pelargonium drummondii</i>	1858	A 31(1): 421	J.Dr. 5: 191
465	<i>Zygophyllum terminale</i>	1858	A 31(1): 437	J.Dr. -: 90
468	<i>Nematolepis plebalioides</i>	1852	A 25(2): 158	J.Dr. 5: 194

Specimen number	Species ¹	Year & place of publication ²		Collector & collection no. ³
469	<i>Phebalium filifolium</i>	1852	A 25(2): 159	J.Dr. 5: 206
470	<i>P. microphyllum</i>	1852	A 25(2): 159	J.Dr. 5: 208
471	<i>P. umbellatum</i>	1849	A 22(2): 15	J.Dr. 5: - Stephenson s.n. Cunn., 1836
472	<i>Crowea augustifolia</i>	1849	A 22(2): 13	J.Dr. 3: 12
473	<i>Eriostemon calycinum</i>	1849	A 22(2): 14	J.Dr. 4: 93
474	<i>E. effusum</i>	1849	A 22(2): 14	Gilb. 95
475	<i>Geleznowia verrucosa</i>	1849	A 22(2): 13	J.Dr. 3: 8
476	<i>Philotheca longifolia</i>	1849	A 32(2): 16	Stephenson s.n.
477	<i>Boronia bicolor</i>	1852	A 25(2): 163	J. Dr. 5: 200
478	<i>B. calophylla</i>	1852	A 25(2): 160	J.Dr. 5: 205
479	<i>B. inornata</i>	1852	A 25(2): 164	J.Dr. 5: 197
480	<i>B. leptophylla</i>	1852	A 25(2): 164	J.Dr. 5: 196
481	<i>B. oxyantha</i>	1852	A 25(2): 165	J.Dr. 5: 198
482	<i>B. thymifolia</i>	1852	A 25(2): 165	J.Dr. 5: 195
483	<i>Microcybe albiflora</i>	1852	A 25(2): 167	J.Dr. 5: 210
484	<i>M. multiflora</i>	1852	A 25(2): 166	J.Dr. 5: 211
485	<i>M. pauciflora</i>	1852	A 25(2): 167	J.Dr. 5: 209
537	<i>Cryptandra cordata</i>	1858	A 31(1): 459	J.Dr. 5: 230
538	<i>C. microcephala</i>	1858	A 31(1): 458	J.Dr. 5: 234
539	<i>C. parvifolia</i>	1858	A 31(1): 459	J.Dr. 4: 156
540	<i>C. pauciflora</i>	1858	A 31(1): 459	J.Dr. 5: 233
541	<i>C. villosa</i>	1858	A 31(1): 458	J.Dr. 5: 232
542	<i>Trymalium oligocephalum</i>	1858	A 31(1): 460	J.Dr. 5: 236
543	<i>T. polycephalum</i>	1858	A 31(1): 460	J.Dr. 5: 91
544	<i>T. thomasioides</i>	1858	A 31(1): 459	J.Dr. 5: 231
589	<i>Callistachys tetragona</i>	1853	A 26(1): 249	J.Dr. 3: 83
590	<i>Oxylobium atropurpureum</i>	1853	A 26(1): 250	J.Dr. 5: 53
591	<i>Isotropis juncea</i>	1853	A 26(1): 251	J.Dr. -: 22
592	<i>Kaleniczienkia daviesioides</i>	1853	A 26(1): 252	J.Dr. -: 26
593	<i>Chorisema capillipes</i>	1853	A 26(1): 255	J.Dr. 5: 27
594	<i>C. cytisoides</i>	1853	A 26(1): 256	J.Dr. 5: 77
595	<i>C. denticulatum</i>	1853	A 26(1): 252	J.Dr. 5: 25
595a	<i>C. trigonum</i>	1853	A 26(1): 254	J.Dr. 5: 22
595b	<i>C. heterophyllum</i>	1853	A 26(1): 255	J.Dr. 5: 27
596	<i>C. humile</i>	1853	A 26(1): 254	J.Dr. 4: 36
597	<i>C. parvifolium</i>	1853	A 26(1): 253	J.Dr. 5: 23
598	<i>C. pubescens</i>	1853	A 26(1): 256	J.Dr. 4: 33
599	<i>Piptomeris aphylla</i>	1853	A 26(1): 258	J.Dr. 5: 24, ?= 5: 32
600	<i>Gompholobium obcordatum</i>	1853	A 26(1): 258	J.Dr. 5: 42
601	<i>Leptocytisus hirtellus</i>	1853	A 26(1): 258	J.Dr. 5: 72
602	<i>Jacksonia compressa</i>	1853	A 26(1): 260	J.Dr. 5: 36
603	<i>J. foliosa</i>	1853	A 26(1): 260	J.Dr. 4: 25
604	<i>J. grevilleoides</i>	1853	A 26(1): 259	J.Dr. 4: 32
605	<i>J. juncea</i>	1853	A 26(1): 261	J.Dr. 5: 33
606	<i>J. umbellata</i>	1853	A 26(1): 261	J.Dr. 5: 34
607	<i>Daviesia acanthoclada</i>	1853	A 26(1): 262	J.Dr. 5: 90
608	<i>D. anceps</i>	1853	A 26(1): 266	J.Dr. 5: 86
609	<i>D. calystegia</i>	1853	A 26(1): 264	J.Dr. 4: 30
610	<i>D. condensata</i>	1853	A 26(1): 265	J.Dr. 5: 50
611	<i>D. crenulata</i>	1853	A 26(1): 265	J.Dr. 5: 40
612	<i>D. lancifolia</i>	1853	A 26(1): 263	J.Dr. 4: 28
613	<i>D. mollis</i>	1853	A 26(1): 263	J.Dr. 5: 39
614	<i>D. obovata</i>	1853	A 26(1): 261	J.Dr. 5: 41
615	<i>D. pachylima</i>	1853	A 26(1): 263	Gilb. 252 J.Dr. 5: 43
616	<i>D. striata</i>	1853	A 26(1): 264	J.Dr. 4: 29
617	<i>Sphaerolobium daviesioides</i>	1853	A 26(1): 266	J.Dr. 5: 46
618	<i>S. drumondii</i>	1853	A 26(1): 267	J.Dr. 5: 47 p.p.
619	<i>Phyllota gracilis</i>	1853	A 26(1): 267	J.Dr. 3: 91
620	<i>P. villosa</i>	1853	A 26(1): 267	Gilb. 255
621	<i>Urodon capitatus</i>	1849	A 22(2): 17	J.Dr. 4: 21
622	<i>U. dasyphyllus</i>	1853	A 26(1): 268	J.Dr. 5: 47 p.p.
623	<i>Aotus genistoides</i>	1853	A 26(1): 268	J.Dr. 5: 61
624	<i>Eutaxia densifolia</i>	1853	A 26(1): 271	J.Dr. 5: 76
625	<i>E. leptophylla</i>	1853	A 26(1): 268	J.Dr. 4: 35
626	<i>E. obovata</i>	1853	A 26(1): 271	J.Dr. 5: 46
627	<i>E. punctata</i>	1853	A 26(1): 272	J.Dr. 5: 69
628	<i>E. uncinata</i>	1853	A 26(1): 269	J.Dr. 5: 49
629	<i>E. divaricata</i>	1853	A 26(1): 270	J.Dr. 4: 23
630	<i>Gastrolobium corymbosum</i>	1853	A 26(1): 272	J.Dr. 5: 58
631	<i>G. crenulatum</i>	1853	A 26(1): 273	J.Dr. 5: 55
632	<i>G. emarginatum</i>	1853	A 26(1): 273	J.Dr. 5: 51
633	<i>G. polycephalum</i>	1853	A 26(1): 274	J.Dr. 5: 54
634	<i>G. pulchellum</i>	1853	A 26(1): 274	J.Dr. 5: 57
635	<i>G. stenophyllum</i>	1853	A 26(1): 275	J.Dr. 5: 52
636	<i>Euchilus calycinus</i>	1853	A 26(1): 276	J.Dr. 5: 75

Specimen number	Species ¹	Year & place of publication ²		Collector & collection no. ³
637	<i>E. purpureus</i>	1853	A 26(1): 276	J.Dr. 5: 70
638	<i>E. rotundifolius</i>	1853	A 26(1): 277	J.Dr. 5: 78
639	<i>E. spinulosus</i>	1853	A 26(1): 275	J.Dr. 5: 71
640	<i>Pultenaea adunca</i>	1853	A 26(1): 279	J.Dr. 5: 66
641	<i>P. brachyphylla</i>	1853	A 26(1): 279	J.Dr. 5: 68
642	<i>P. diemenica</i>	1853	A 26(1): 277	Gunn s.n.
643	<i>P. neurocalyx</i>	1853	A 26(1): 281	J.Dr. 5: 63
644	<i>P. pteronioides</i>	1853	A 26(1): 280	J.Dr. 5: 67
645	<i>P. verruculosa</i>	1853	A 26(1): 278	J.Dr. 5: 65
646	<i>P. verticillata</i>	1853	A 26(1): 279	J.Dr. 5: 64
647	<i>Mirbelia aspera</i>	1853	A 26(1): 281	J.Dr. 5: 28
648	<i>M. racemosa</i>	1853	A 26(1): 282	J.Dr. 5: 59
649	<i>M. subcordata</i>	1853	A 26(1): 282	J.Dr. 5: 60
650	<i>Dichosema microphyllum</i>	1853	A 26(1): 283	J.Dr. 5: 85
651	<i>D. multicaule</i>	1853	A 26(1): 283	J.Dr. 4: 34
652	<i>Platylobium spinosum</i>	1853	A 26(1): 284	J.Dr. 5: 84
653	<i>Bossiaea divaricata</i>	1853	A 26(1): 285	J.Dr. 5: 83
654	<i>B. gilbertii</i>	1853	A 26(1): 286	Gilb. 313
655	<i>B. oxyclada</i>	1853	A 26(1): 284	J.Dr. 5: 82
656	<i>B. peduncularis</i>	1853	A 26(1): 287	J.Dr. 5: 80
657	<i>B. rigida</i>	1853	A 26(1): 285	J.Dr. 5: 79
677	<i>Actinodium proliferum</i>	1849	A 22(2): 17	J.Dr. -: 44
678	<i>Genetyllis agathosmoides</i>	1852	B 10: 322	J.Dr. 5: 103
679	<i>G. hypericifolia</i>	1852	B 10: 323	J.Dr. 5: 98
680	<i>G. lejustyla</i>	1852	B 10: 323	J.Dr. 5: 101
681	<i>G. macrostegia</i>	1849	A 22(2): 18	J.Dr. -: 40
				J.Dr. 5: 97
682	<i>G. oederioides</i>	1849	A 22(2): 18	J.Dr. -: 41
682	<i>G. oxylepis</i>	1852	B 10: 324	J.Dr. 5: 100
683	<i>G. squarrosa</i>	1852	B 10: 323	J.Dr. 5: 99
684	<i>Paryphantha cuspidata</i>	1852	B 10: 321	J.Dr. 5: 24
685	<i>Darwinia brevistyla</i>	1847	A 20(1): 155	J.Dr. 3: 23
686	<i>D. satirejaefolia</i>	1852	B 10: 324	J.Dr. 4: 42
687	<i>Decalophium darwinoides</i>	1852	B 10: 326	J.Dr. 5: 106
688	<i>D. juniperinum</i>	1852	B 10: 325	J.Dr. 5: 104
689	<i>D. melaleucum</i>	1852	B 10: 325	J.Dr. 5: 105
690	<i>D. micranthum</i>	1852	B 10: 326	J.Dr. 5: 22
691	<i>D. pauciflorum</i>	1847	A 20(1): 154	J.Dr. -: 31
		1852	B 10: 325	J.Dr. 3: 31
692	<i>D. rugulosum</i>	1852	B 10: 326	J.Dr. 4: 45
	= <i>Genetyllis pauciflora</i>	1849	A 22(2): 17	
693	<i>Thryptomene hyporhytis</i>	1862	A 35(2): 324	J.Dr. 7: 63
694	<i>T. mucromulata</i>	1847	A 20(1): 156	J.Dr. -: 33
695	<i>T. obovata</i>	1852	B 10: 322	J.Dr. 5: 23
696	<i>T. prolifera</i>	1862	A 35(2): 324	J.Dr. 7: 62
697	<i>T. racemulosa</i>	1847	A 20(1): 156	J.Dr. -: 32
698	<i>Verticordia brachypoda</i>	1847	A 20(1): 158	J.Dr. -: 28
				Gilb. 30
699	<i>V. carinata</i>	1849	A 22(2): 19	J.Dr. -: 46
700	<i>V. cespitosa</i>	1847	A 20(1): 157	Gilb. 330
701	<i>V. fastigiata</i>	1852	B 10: 327	J.Dr. 5: 114
702	<i>V. fimbriilepis</i>	1847	A 20(1): 158	J.Dr. -: 24
703	<i>V. fimbripetala</i>	1849	A 22(2): 19	J.Dr. 4: 47
				J.Dr. 5: 111
704	<i>V. gilbertii</i>	1847	A 20(1): 160	Gilb. 11
				Gilb. 13
705	<i>V. hirta</i>	1852	B 10: 327	J.Dr. 5: 112
706	<i>V. monadelpha</i>	1847	A 20(1): 158	J.Dr. -: 27
707	<i>V. multiflora</i>	1847	A 20(1): 159	J.Dr. -: 26
708	<i>V. oxylepis</i>	1852	B 10: 327	J.Dr. 5: 113
709	<i>V. pectinata</i>	1852	B 10: 327	J.Dr. 5: 110
710	<i>V. pentandra</i>	1847	A 20(1): 157	Gilb. 329
711	<i>V. stylosa</i>	1847	A 20(1): 160	Gilb. 327
712	<i>V. umbellata</i>	1847	A 20(1): 159	J.Dr. -: 25
				J.Dr. 5: 108
				J.Dr. 5: 109
713	<i>Lhotzkya scabra</i>	1862	A 35(2): 324	Gilb. 186, ?= 126
714	<i>Calycothrix cuspidata</i>	1847	A 20(1): 162	Gilb. 333
				Gilb. 335
715	<i>C. depressa</i>	1847	A 20(1): 162	J.Dr. -: 24
716	<i>C. diversifolia</i>	1852	B 10: 328	J.Dr. 5: 116 p.p.
717	<i>C. pulchella</i>	1852	B 10: 328	J.Dr. 5: 115
718	<i>C. tenuiramea</i>	1849	A 22(2): 20	J.Dr. -: 50
719	<i>Tetrapora glomerata</i>	1852	B 10: 329	J.Dr. 5: 117
720	<i>T. verrucosa</i>	1852	B 10: 329	J.Dr. 5: 137
721	<i>Harmogia leptophylla</i>	1852	B 10: 330	J.Dr. 3: 35 p.p.
				J.Dr. 3: 37
722	<i>H. parviflora</i>	1852	B 10: 330	J.Dr. 5: 25

Specimen number	Species ¹	Year & place of publication ²		Collector & collection no. ³
723	<i>H. serpyllifolia</i>	1852	B 10: 330	J.Dr. 3: 38
724	<i>Rinzia crassifolia</i>	1852	B 10: 331	J.Dr. 5: 122
725	<i>R. longifolia</i>	1852	B 10: 331	J.Dr. 5: 121
726	<i>R. oxycoccoides</i>	1852	B 10: 331	J.Dr. 5: 120
727	<i>Cyathostemon tenuifolius</i>	1852	B 10: 332	J.Dr. 5: 123
728	<i>Anticoryne diosmoides</i>	1852	B 10: 332	J.Dr. 5: 124
729	<i>Hypocalymma ciliatum</i>	1862	A 35(2): 325	J.Dr. 7: 66
730	<i>H. cuneatum</i>	1862	A 35(2): 325	J.Dr. 7: 67
731	<i>H. linifolium</i>	1862	A 35(2): 325	J.Dr. 7: 65
732	<i>H. myrtifolium</i>	1852	B 10: 333	J.Dr. 5: 118
733	<i>H. speciosum</i>	1852	B 10: 332	J.Dr. 5: 119
734	<i>H. tetrapterum</i>	1862	A 35(2): 325	J.Dr. 7: 68
735	<i>Astartea clavulata</i>	1852	B 10: 333	J.Dr. 5: 128
736	<i>Agonis floribunda</i>	1849	A 22(2): 20	J.Dr. -: 56
737	<i>A. glabra</i>	1852	B 10: 334	J.Dr. 5: 132
738	<i>Pericalymma roseum</i>	1852	B 10: 334	J.Dr. 5: 135
739	<i>P. teretifolium</i>	1852	B 10: 334	J.Dr. 5: 134
740	<i>Leptospermum incanum</i>	1852	B 10: 335	J.Dr. 5: 130
741	<i>Leptospermum nitens</i>	1852	B 10: 335	J.Dr. 5: 28
742	<i>L. oligandrum</i>	1852	B 10: 335	J.Dr. 5: 129
743	<i>Kunzea hirsuta</i>	1862	A 35(2): 326	Brogden s.n.
744	<i>K. oligandra</i>	1852	B 10: 336	J.Dr. 5: 139
745	<i>K. scricea</i>	1847	A 20(1):162	J.Dr. -: 40
746	<i>K. sprengelioides</i>	1852	B 10: 336	J.Dr. 5: 138
747	<i>K. squarrosa</i>	1852	B 10: 335	J.Dr. 5: 136
748	<i>Piptandra spatulata</i>	1862	A 35(2): 324	J.Dr. 7: 59
749	<i>Eucalyptus acutangula</i>	1852	B 10: 338	J.Dr. 5: 189
750	<i>E. angustifolia</i>	1852	B 10: 337	J.Dr. 5: 33
751	<i>E. brachypoda</i>	1849	A 22(2): 21	J.Dr. 4: 73
752	<i>E. calycogona</i>	1852	B 10: 338	J.Dr. 5: 184
753	<i>E. celastroides</i>	1852	B 10: 338	J.Dr. 5: 34
754	<i>E. cuspidata</i>	1849	A 22(2): 21	J.Dr. 4: 75
755	<i>E. erythronema</i>	1852	B 10: 337	J.Dr. -: 37
756	<i>E. falcata</i>	1847	A 20(1): 163	J.Dr. -: 70
757	<i>E. goniantha</i>	1847	A 20(1): 163	J.Dr. -: 71
758	<i>E. pruinosa</i>	1849	A 22(2): 23	J.Dr. 4: 70
759	<i>E. macrocera</i>	1849	A 22(2): 20	J.Dr. 4: 67
760	<i>E. obcordata</i>	1852	B 10: 337	J.Dr. 5: 183
761	<i>E. pyriformis</i>	1849	A 22(2): 22	J.Dr. 4: 69
762	<i>E. tetraptera</i>	1849	A 22(2): 22	J.Dr. 4: 17
763	<i>E. uncinata</i>	1849	A 22(2): 23	J.Dr. -: 66
764	<i>E. xanthonema</i>	1847	A 20(1): 163	J.Dr. -: 67
765	<i>Melaleuca adnata</i>	1852	B 10: 343	J.Dr. 5: 160
766	<i>M. angulata</i>	1852	B 10: 342	J.Dr. 5: 161
767	<i>M. apodocephala</i>	1852	B 10: 340	J.Dr. 5: 168
768	<i>M. blaeriaefolia</i>	1847	A 20(1): 165	J.Dr. -: 45
769	<i>M. bracteosa</i>	1852	B 10: 340	J.Dr. 5: 159
770	<i>M. brevifolia</i>	1852	B 10: 342	J.Dr. 5: 164
771	<i>M. canaliculata</i>	1852	B 10: 342	J.Dr. 5: 152
772	<i>M. carinata</i>	1852	B 10: 344	J.Dr. 5: 165
773	<i>M. ciliosa</i>	1862	A 35(2): 326	J.Dr. 7: 76
774	<i>M. citrina</i>	1852	B 10: 341	J.Dr. 5: 148
775	<i>M. concinna</i>	1852	B 10: 339	J.Dr. 5: 172
776	<i>M. cordata</i>	1852	B 10: 339	J.Dr. 5: 31
777	<i>M. cucullata</i>	1852	B 10: 343	J.Dr. 5: 151
779	<i>M. cuneata</i>	1852	B 10: 339	J.Dr. 5: 30
780	<i>M. cuspidata</i>	1862	A 35(2): 327	J.Dr. 7: 77
781	<i>M. cyrtodonta</i>	1849	A 22(2): 24	J.Dr. 4: 65
782	<i>M. depaupcrata</i>	1852	B 10: 343	J.Dr. 5: 153
783	<i>M. divaricata</i>	1852	B 10: 344	J.Dr. 5: 144
784	<i>M. epacridioides</i>	1847	A 20(1): 165	J.Dr. 3: 46
785	<i>M. erucaeformis</i>	1852	B 10: 344	J.Dr. 5: 149
786	<i>M. hamulosa</i>	1847	A 20(1): 165	J.Dr. -: 44
787	<i>M. lateralis</i>	1852	B 10: 339	J.Dr. 5: 162
788	<i>M. laxiflora</i>	1852	B 10: 341	J.Dr. 5: 142
789	<i>M. macronychia</i>	1852	B 10: 340	J.Dr. 5: 32
790	<i>M. nummularia</i>	1832	B 10: 341	J.Dr. 5: 140
790a	<i>M. pauciflora</i>	1847	A 20(1): 166	Gilb. 40
791	<i>M. pinifolia</i>	1847	A 20(1): 166	Gilb. 87
792	<i>M. rigidifolia</i>	1852	B 10: 342	J.Dr. -: 176
793	<i>M. serpyllifolia</i>	1852	B 10: 339	J.Dr. 5: 175
794	<i>M. sparsiflora</i>	1847	A 20(1): 167	J.Dr. -: 50
795	<i>M. subfalcata</i>	1852	B 10: 341	J.Dr. 5: 150

Specimen number	Species ¹	Year & place of publication ²		Collector & collection no. ³
796	<i>Regelia adpressa</i>	1849	A 22(2): 25	J.Dr. 4: 63
797	<i>R. gibbosa</i>	1847	A 20(1): 168	J.Dr. -: 55
798	<i>Bcaufortia heterophylla</i>	1852	B 10: 345	J.Dr. 5: 174
799	<i>B. microphylla</i>	1849	A 22(2): 24	J.Dr. 4: 64
800	<i>B. puberula</i>	1852	B 10: 345	J.Dr. 5: 173
801	<i>B. velutina</i>	1852	B 10: 345	J.Dr. 5: 179
802	<i>Calothamnus affinis</i>	1852	B 10: 346	J.Dr. 5: 182
803	<i>C. aspera</i>	1849	A 22(2): 25	J.Dr. 4: 60
804	<i>C. nodosa</i>	1847	A 20(1): 168	J.Dr. -: 60
805	<i>Punicella carinata</i>	1852	B 10: 333	J.Dr. 5: 26
		1852	A 26(1): 287	J.Dr. -: 2
806	<i>Trichobasis aurea</i>	1852	B 10: 337	J.Dr. 5: 147
811a	<i>Hydrocotyle medicaginoidea</i>	1849	A 22(2): 27	J.Dr. 4: 144
812	<i>H. pilifera</i>	1849	A 22(2): 26	J.Dr. s.n., 1839
813	<i>H. rugulosa</i>	1849	A 22(2): 27	J.Dr. 4: 146
814	<i>H. verticillata</i>	1849	A 22(2): 28	J.Dr. 4: 145
815	<i>Dimetopia anisocarpa</i>	1849	A 22(2): 2	J.Dr. 4: 132
816	<i>D. grandis</i>	1849	A 22(2): 29	J.Dr. 4: 133
817	<i>Platysace flexuosa</i>	1849	A 22(2): 29	J.Dr. 4: 138
818	<i>Trachymene eommutata</i>	1849	A 22(2): 30	J.Dr. -: 229
				J.Dr. 4: 136
819	<i>T. deflexa</i>	1849	A 22(2): 31	J.Dr. 4: 137
820	<i>T. effusa</i>	1849	A 22(2): 31	J.Dr. 4: 135
821	<i>Xanthosia rhomboidea</i>	1849	A 22(2): 32	J.Dr. 4: 134
822	<i>X. villosa</i>	1849	A 22(2): 32	J.Dr. 4: 139, ?= 133
849a	<i>Diplopappus australasicus</i>	1851	A 24(1): 171	J.Dr. 4: 218
				J.Dr. 5: 373
850	<i>Eurybia imbricata</i>	1851	A 24(2): 61	J.Dr. 5: 370
850a	<i>Diplopappus passerinoides</i>	1851	A 24(2): 62	J.Dr. 5: 371
851	<i>Eurybia leptophylla</i>	1851	A 24(1): 171	J.Dr. -: 127
853	<i>Erigeron liatroides</i>	1851	A 24(1): 172	J.Dr. 4: 222, ?= 122
855	<i>Goniopogon multicaule</i>	1851	A 24(1): 173	J.Dr. 4: 215, ?= 115
856	<i>Isoetopsis graminifolia</i>	1851	A 24(1): 174	J.Dr. 5: 390
				J.Dr. 4: 207
857	<i>Brachycome pachyptera</i>	1851	A 24(1): 175	J.Dr. 4: 205
858	<i>B. tenella</i>	1851	A 24(1): 176	J.Dr. 4: 208
868a	<i>Ceratogyne obionoides</i>	1851	A 24(2): 69	J.Dr. 5: 56
882	<i>Epitriche euspidata</i>	1851	A 24(2): 75	J.Dr. 5: 58
883	<i>Chrysocoryne uniflora</i>	1851	A 24(1): 188	J.Dr. -: 116
884	<i>Piptostenima carpesioides</i>	1851	A 24(1): 192	J.Dr. 4: 200
885	<i>Paehysurus multiflorus</i>	1851	A 24(1): 192	J.Dr. -: 117
				J.Dr. 5: 389
885a	<i>Skirrhophorus drummondii</i>	1851	A 24(1): 188	J.Dr. -: 123
885b	<i>S. mucronulatus</i>	1851	A 24(2): 72	J.Dr. 5: 59
886	<i>Waitzia dasycarpa</i>	1851	A 24(2): 77	J.Dr. 5: 65 p.p.
887	<i>W. discolor</i>	1851	A 24(2): 194	J.Dr. 4: 198
				J.Dr. s.n., 1848
888	<i>W. odontolepis</i>	1851	A 24(2): 77	J.Dr. 5: 382
889	<i>Podolepis gilbertii</i>	1851	A 24(1): 195	J.Dr. 5: 386
				Gilb. 269
				Gilb. 282
890	<i>P. pallida</i>	1851	A 24(2): 78	J.Dr. 5: 387
891	<i>Ozothamnus tephrodes</i>	1851	A 24(2): 79	J.Dr. 5: 385
893	<i>Helichrysum ambiguum</i>	1851	A 24(1): 195	J.Dr. 3: 121
				J.Dr. 4: 220
895	<i>Chrysocephalum canescens</i>	1851	A 24(1): 196	Gilb. 285
896	<i>C. glabratum</i>	1851	A 24(1): 197	J.Dr. -: 115
897	<i>Helipterum fuseense</i>	1851	A 24(2): 80	J.Dr. 5: 64
898	<i>H. heteranthum</i>	1851	A 24(1): 198	J.Dr. 4: 214
899	<i>H. pusillum</i>	1851	A 24(2): 80	J.Dr. 5: 384
900	<i>H. tcnellum</i>	1851	A 24(1): 198	Gilb. 272
901	<i>Xanthochrysum filifolium</i>	1851	A 24(1): 199	J.Dr. -: 119
902	<i>Triehostegia astroides</i>	1851	A 24(2): 81	J.Dr. 5: 66
904	<i>Gnaphalium sericeum</i>	1851	A 24(2): 83	J.Dr. 5: 392
905	<i>Argyrolottis turbinata</i>	1851	A 24(2): 84	J.Dr. 5: 63
908	<i>Ercehtits incana</i>	1851	A 24(2): 85	J.Dr. 5: 379
909	<i>E. pieridioides</i>	1851	A 24(1): 200	J.Dr. -: 132
923	<i>Senecio barkhausioides</i>	1851	A 24(2): 86	J.Dr. 5: 378
927	<i>S. gilbertii</i>	1851	A 24(1): 208	Gilb. 289
939	<i>Tripteris atropurpurea</i>	1851	A 24(1): 212	J.Dr. -: 131
1001	<i>Physopsis spicata</i>	1849	A 22(2): 34	J.Dr. 4: 235, ?= 234
1002	<i>Quoya racemosa</i>	1863	A 36(2): 194	J.Dr. 3: 141
				J.Dr. 5: 73
1041	<i>Pityrodia drummondii</i>	1863	A 36(2): 213	J.Dr. 7: 141
1042	<i>Cyanostegia angustifolia</i>	1849	A 22(2): 36	J.Dr. -: 140
1043	<i>C. intermedia</i>	1849	A 22(2): 36	J.Dr. -: 161
1044	<i>C. lanecolata</i>	1849	A 22(2): 35	J.Dr. -: 139

Specimen number	Species ¹	Year & place of publication ²		Collector & collection no. ³
1058	<i>Lachnocephalus lepidotus</i>	1849	A 22(2): 36	J.Dr. 4: 235 Gilb. 6
1155	<i>Diplopappus glandulosus</i>	1851	A 24(2): 62	J.Dr. 5: 69
1059	<i>Pyncolachne ledifolia</i>	1863	A 36(2): 215	J.Dr. 7: 220
Supplementary type collection				
4.15	<i>Lepidium drummondii</i>			
11.38	<i>Guichenotia macrantha</i>			
11.45	<i>Rulingia crispa</i> [= <i>Commersonia crispa</i>]			
12.50	<i>Tetralthea pubescens</i>			
12.51	<i>Tetralthea tenuiramea</i>			
27.178	<i>Astartea muriculata</i>			
27.180	<i>Calothamnus plumosa</i>			
27.183	<i>Decalophium cornigerum</i>			
27.184	<i>Genetyllis drummondii</i>			
27.193	<i>Melaleuca thyoides</i>			

¹ Original spellings

² A = *Bull. Soc. Imp. Naturalistes Moscou*; B = *Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg*

³ Cunn. = Allan Cunningham (1791–1839); Gilb. = John Gilbert (1810–1845); J. Dr. = James Drummond (1784–1863)

All except one of Turezhaninov's fifteen papers describing new plants from Australia were published in *Bull. Soc. Imp. Naturalistes Moscou*. Papers were first communicated to the Society, submitted for publication, typeset and then submitted to the censor for approval.

On the verso of the title page of each number of the *Bull. Soc. Imp. Naturalistes Moscou* is a stamp giving official approval to proceed with publication. This stamp, in Russian, is translated as:

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Moscow. Date. Censor(s)'

Thus the censor's date gives a clue to publication date. But clearly the best evidence for publication date would be the day on which copies were approved by the Censorship Committee for distribution. This latter information has been searched for in the Lenin Library, Moscow and archival institutes in Leningrad without success.

The Société Impériale des Naturalistes de Moscow met every four or five weeks, on a Saturday, with an annual summer break of four or five months from May to August or September. At each meeting there was usually an announcement of papers accepted or offered for publication. Because Turezhaninov did not live near Moscow this was done by correspondence. Announcements of forthcoming publications were printed in the proceedings, the Séances (meetings), published in *Bull. Soc. Imp. Naturalistes Moscou*.

The Séances also contained announcements made by the First Secretary of the Society (Renard, at the time of the Turezhaninov publications), on the publication of the various numbers of the *Bull. Soc. Imp. Naturalistes Moscou*. Each volume of the bulletin consists of two parts; part 1 has numbers 1 and 2 and part 2 has numbers 3 and 4. When these were published Renard made an announcement at a meeting and this was published in the bulletin. Thus, the date of presentation of a number or part of a volume by Renard is also an indication of publication date of the parts and numbers of the bulletin.

The dates published in the bulletin and the date of the censor stamp are apparently in the Julian calendar.

Russia did not change to the Gregorian calendar until 1917 and it is necessary to add 12 days after the year 1800 to convert from the Julian to the Gregorian calendar. The *Bull. Soc. Imp. Naturalistes Moscou* sometimes cites both calendars and some meteorological papers have Gregorian dates, however it is almost certain that the censor dates are in Julian and it is reasonable to conclude that the dates cited in the Séances are also in that calendar.

In Kew the correspondence of Hooker and Bentham contains a letter from Renard in Moscow to W. J. Hooker concerning *Bull. Soc. Imp. Naturalistes Moscou* 1843, numbers 2 and 3 (Renard 1843). These were sent to Hooker from Moscow dated 18/30 Sept. 1843 (the first date is according to the Julian calendar, the second to the Gregorian). Information on the date of censor approval and announcement by the First Secretary of the Society of these journal parts is as follows (Renard, *Bull. Soc. Imp. Naturalistes Moscou* 16: 808):

	Censor approval	Publication presented by Renard
1843 No 2	28 March 1843	16 Sept. 1843
No 3	13 June 1843	16 Sept. 1843

Thus the date presented by Renard is only 2 days before a copy was addressed to Hooker. It seems that the date of presentation by Renard is the best available indicator of publication date except for those papers printed in the summer holiday break of four or five months. Table III presents details of the fourteen papers of Turezhaninov with Australian taxa published in *Bull. Soc. Imp. Naturalistes Moscou*. The year, volume, part, number and pagination are listed for each publication. In addition the table gives the date of censor approval, date of mention in the Society Séances, the date the number was presented to the Société Impériale des Naturalistes de Moscow by Renard, and the 'established' publication date. This information has been gathered from a survey of *Bull. Soc. Imp. Naturalistes Moscou* from 1845 to 1864.

A publication of Turezhaninov which poses no problem for dating was printed in 1852 in the St Petersburg journal, *Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg* 10: 322–346. The paper is titled 'Myr-

Table II
Australian plant genera described by Turczaninov*

Genus	Publication
<i>Achilleopsis</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 22(2): 9 (1849)
<i>Actinostigma</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 32(1): 259 (1859)
<i>Anticoryne</i>	<i>Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg</i> 10: 332 (1852)
<i>Argyroglossis</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 24(2): 83 (1851)
<i>Asterochiton</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 25(2): 138 (1852)
<i>Ceratogyne</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 24(2): 68 (1851)
<i>Cyanostegia</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 22(2): 35 (1849)
<i>Cyathostemon</i>	<i>Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg</i> 10: 331 (1852)
<i>Decalophium</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 20(1): 153 (1847)
<i>Ditomostrophe</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 19(2): 498 (1847)
<i>Epitriche</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 24(2): 74 (1851)
<i>Ericomyrtus</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 20(1): 154 (1847)
<i>Gamozygis</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 24(2): 75 (1851)
<i>Geleznovia</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 22(2): 12 (1849)
<i>Gilberta</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 24(1): 192 (1851)
<i>Gomotriche</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 22(2): 37 (1849)
<i>Goniopogon</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 24(1): 173 (1851)
<i>Gonostegia</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 19(2): 509 (1847)
<i>Gyrostephium</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 24(2): 76 (1851)
<i>Hexagonotheca</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 19(2): 505 (1847)
<i>Isoetopsis</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 24(1): 174 (1851)
<i>Kaleniczenkia</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 26(1): 252 (1853)
<i>Lachnocephalus</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 22(2): 36 (1849)
<i>Leptotriche</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 24(2): 73 (1851)
<i>Macrostegia</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 25(2): 177 (1852)
<i>Meladenia</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 21(1): 576 (1848)
<i>Microcybe</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 25(2): 166 (1852)
<i>Nematolepis</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 25(2): 158 (1852)
<i>Ochrolasia</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 22(2): 3 (1849)
<i>Pentaptelion</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 36(2): 193 (1863)
<i>Physopsis</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 22(2): 34 (1849)
<i>Piptandra</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 35(2): 323 (1863)
<i>Piptomeris</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 26(1): 257 (1853)
<i>Piptostemma</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 24(1): 191 (1851)
<i>Punicella</i>	<i>Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg</i> 10: 333 (1852)
<i>Pycnolachne</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 36(2): 214 (1863)
<i>Toxanthes</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 24(1): 176 (1851)
<i>Trichobasis</i>	<i>Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg</i> 10: 336 (1852)
<i>Trichostegia</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 24(2): 81 (1851)
<i>Triptilodiscus</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 24(2): 66 (1851)
<i>Urodon</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 22(2): 16 (1849)
<i>Xanthochrysum</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 24(1): 199 (1851)
<i>Xerosollya</i>	<i>Bull. Soc. Imp. Naturalistes Moscou</i> 27(2): 362 (1855)

* The volume number and part number 1 or 2 is given as well as the page reference. The date is the date of publication, not the date of the journal.

Table III
Turczaninov publications of Australian plants in *Bull. Soc. Imp. Naturalistes Moscou**

year	vol.	part	no.	pages	ccnsor approval	presented at Sćance	presented by Renard	'established' publ. date
1846	19	2	4	497-510	18 Spt. 1846	19 Spt. 1846	16 Jan. 1847	28 Jan. 1847
1847	20	1	1	148-174	7 March 1847	13 March 1847	—	March 1847
1849	22	2	3	3-38	15 July 1849	24 Feb. 1849	20 Oct. 1849	July-Oct. 1849
1851	24	1	1	166-214	17 Jan. 1851	19 Oct. 1850	15 March 1851	27 March 1851
1851	24	2	3	59-95	3 Aug. 1851	18 May 1851	25 Oct. 1851	Aug.-Oct. 1851
1852	25	2	3	138-181	31 Oct. 1852	25 Oct. 1851	13 Nov. 1852	25 Nov. 1852
1853	26	1	2	249-288	5 Aug. 1853	19 March 1853	29 Oct. 1853	Aug.-Oct. 1853
1854	27	2	4	270-372	13 April 1855	18 Nov. 1854	21 April 1855	3 May 1855
1858	31	1	1	185-250	27 May 1858	17 Oct. 1857	16 Oct. 1858	May-Oct. 1858
1858	31	1	2	379-476	7 Sept 1858	17 Oct. 1857	16 Oct. 1858	28 Oct. 1858
1859	32	1	1	258-277	24 March 1859	15 Oct. 1859	16 Oct. 1859	March-Oct. 1859
1862	35	2	4	321-331	16 May 1863	11 Oct. 1862	17 Oct. 1863	May-Oct. 1863
1863	36	1	2	545-615	11 Sept. 1863	21 Feb. 1863	17 Oct. 1863	Sept.-Oct. 1863
1863	36	2	3	193-227	12 Dec. 1863	17 Oct. 1863	19 Dec. 1863	31 Dec. 1863

* Dates for censor approval and presentation at meetings are in the original Julian calendar. The established publication date has been converted to the Gregorian calendar.

taeae xeroearpicae, in Nova Hollandia a cl. Drummond lectae et plurumque in collectione ejus quinta distributae, determinatae et descriptae'. The publication date of this paper is easily confirmed because of the imprint 'Emis' (issued), in this case 15 June, i.e. 27 June, 1852. The paper was subsequently reset and republished in *Mélanges Biol. Bull. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg* 1(4): 394–428, 20 August, i.e. 1 September, 1852. This paper is of special interest because it described 77 species of Western Australian Myrtaeae and it was not seen by Bentham before he completed Volume 3 of *Flora australiensis* containing the Myrtaceae, published in January 1867 (Bentham 1867, 3: 1–289). The reason for this was probably due to poor postal communications between western Europe and Russia. Russia was involved in a war with Turkey from 1853, effectively cutting off the southern sea route to Russia, and Britain was involved in the Crimean War in 1854–56.

The significance of Turczaninov's contribution

Obviously there are advantages and limitations for taxonomists like Turczaninov who worked on very small samples of foreign floras. There is a greater chance of recording seemingly significant morphological discontinuities in small samples of specimens so that species or generic boundaries may appear substantial. This may partly explain why only a quarter of Turczaninov's 43 genera are currently recognized by Australian taxonomists and many of his 400 species were reduced by Bentham to synonymy (Bentham 1863–1878). Nevertheless, Turczaninov was a competent taxonomist; he had limited access to literature and herbaria and he worked in an area far removed from the centres of taxonomic research. Despite these disadvantages he made a substantial contribution to knowledge of the world flora (Lipschitz 1964). His published descriptions are generally detailed and clear, unlike the descriptions of many of his contemporaries. For example, the description of *Melaleuca cordata* Turcz. (*Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg* 10: 339, 1852) compares favourably with the description for *Melaleuca cordata* Benth. (*Flora australiensis*, 3: 149, 1867). Coincidentally, both descriptions are based on James Drummond 5th

collection number 31. *Melaleuca cordata* Turcz. was published in the paper not seen by Bentham.

It is likely that as taxonomic research on the Australian flora proceeds many Turczaninov taxa will be resurrected. To achieve taxonomically sound treatments of the taxa described by Turczaninov it is essential that a study be made of his collection of holotypes in Kiev.

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